

WHAT IS CLAIMED IS:

1. A fluid dynamic bearing motor assembly, the assembly comprising:
a shaft;
a sleeve configured to rotate about a rotational axis; and
a counterplate attached to the sleeve, the counterplate including a radial section
and an axial section, the axial section being attached to the radial section
and partially defining a labyrinth to remove bearing fluid from a region
defined between the shaft and the axial section.
2. The assembly of claim 1, wherein the shaft includes a tapered wall configured
such that capillary action draws bearing fluid from the region defined between the shaft
and the axial section through a first gap defined between the shaft and the axial section.
3. The assembly of claim 1, further comprising a first gap defined between the shaft
and the axial section and a second gap defined between the axial section and a thrust
plate, the thrust plate being attached to the shaft, and the first gap being larger than the
second gap such that capillary action draws bearing fluid from the region defined
between the shaft and the axial section through the first gap towards the second gap.
4. The assembly of claim 3, wherein the labyrinth comprises the first gap and the
second gap.

5. The assembly of claim 3, wherein centrifugal forces generated by the relative rotation of the thrust plate and the counterplate move bearing fluid through the second gap towards a cavity defined between the counterplate and the thrust plate.
6. The assembly of claim 1, wherein the radial section and the axial section are configured to prevent bearing fluid from splashing out of a bearing fluid reservoir into the region defined between the shaft and the axial section.
7. The assembly of claim 6, wherein the bearing fluid reservoir is defined by diverging surfaces of the counterplate and a thrust plate, the thrust plate being attached to the shaft.
8. The assembly of claim 7, wherein the radial section and the axial section are configured to contain the bearing fluid that splashes out of the bearing fluid reservoir within a cavity defined between the counterplate and the thrust plate.
9. The assembly of claim 1, further comprising a cavity defined between the counterplate and a thrust plate, the thrust plate being attached to the shaft, and the cavity being configured with decreasing widths between the axial section and a distal end of a bearing fluid reservoir such that capillary action draws bearing fluid disposed within the cavity towards the bearing fluid reservoir.

10. The assembly of claim 9, wherein the bearing fluid reservoir is defined by diverging surfaces of the counterplate and the thrust plate.
11. The assembly of claim 9, wherein centrifugal forces generated by the relative rotation of the thrust plate and the counterplate move bearing fluid disposed within the cavity towards the bearing fluid reservoir.
12. The assembly of claim 1, wherein a thrust plate includes a first seal wall and the counterplate includes a second seal wall, the thrust plate being attached to the shaft, and the first seal wall and second seal wall being configured to form a capillary seal that contains bearing fluid within a bearing fluid reservoir.
13. The assembly of claim 1, wherein the counterplate provides a thrust surface for a fluid dynamic thrust bearing.
14. The assembly of claim 1, wherein the assembly is disposed within an electronic device.
15. The assembly of claim 14, wherein the electronic device is a disc drive.